

Guideline 151-16: Enforcement Analytical Method

Analytical Method for the active ingredient (1-triacontanol) in the end-use product

(a) Preparing samples for quantitative analysis

- 1 Twenty (20) ml of the product is added to a 200 ml round bottomed flask and the water in the sample is evaporated to dryness with a rotary evaporator.
- 2 Ten (10) ml of chloroform containing 2.5 mg of tetra-triacontane is added to the flask and the flask is shaken vigorously.
- 3 0.5 ml of bis(trimethylsilyl)trifluoroacetamide is added to 1 ml of the chloroform solution and kept at ambient temperature over 12 hours for derivatizing 1-triacontanol to the trimethylsilylester.

(b) Quantitative analysis of 1-triacontanol with gas-liquid chromatography

Samples obtained from the procedure (a) are run on a gaschromatograph with a flam ionization detector. The column is 30m x 0.53mm DB-1 (J & W Scientific). Column temperature is 290°C and an inlet temperature is 350°C. Peak areas of 1-triacontanol trimethylsilyl ester and tetratriacontane are determined by a data recorder. The weight ratio of 1-triacontanol to tetratriacontane is derived from the peak area ratio and a calibration curve. The concentration of 1-triacontanol is calculated from the weight ratio.